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ABSTRACT

Play and language development were compared in four normally developing preschoolers and five language-delayed children (2.5-6 years old). Ss were administered a scale which assessed play, language, and drawing stages. Data were graphed and studied in terms of distribution and level of function across the three symbolic function areas (play, language, and drawing). Findings revealed that language-delayed Ss demonstrated delays in the three areas. Their performance patterns suggested that language lagged at least 6 months behind their play and drawing behaviors. The finding that language-delayed Ss may possess representational skills in play and drawing equal to or above their language function suggested that play and drawing may be ways to help improve language function. Implications are noted for the next phase of the project. (CL)

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Assessing the Representational Behaviors of Play, Language and Drawing in Normal and Language-Delayed Children

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Over the past ten years there has been an increasing effort to identify the developmental link between cognitive thought and symbolic language development (Bloom and Lahey, 1978; Chapman, 1982; McLean and Snyder-McLean, 1978). Generally the focus of this work has been to discuss one form or another of the cognitive hypothesis (Chapman, 1982). Results of studies in this area have been equivocal in the sense that there is no clear evidence to suggest a one-to-one mapping of symbolic language onto cognitive skills. Rather, there appears to be a more simultaneous acquisition of cognitive and language abilities in situations in which some cognitive abilities consistently precede or follow the development of verbal language. This type of simultaneous development describes what is called the correlational form of the cognitive hypothesis (Chapman, 1982). Westby, (1980), Chapman (1982), and others have recently begun to examine child language from the perspective of this correlational position. Westby (1980) argues that because of the simultaneous acquisition of certain cognitive and language abilities, it should be possible to develop a scale to examine cognitive and language skills in children. The scale developed by Westby is the Symbolic Play Scale. It consists of ten stages which begin at the nine-to-twelve month level for Stage One and go to the fifth year for Stage Ten. At all stages both language and play are examined. In the present study, an attempt was made to expand the Westby Scale in accordance with the correlational form of the cognitive hypothesis. The Westby Scale was expanded to establish a more complete picture of the child's level of representational thought at any given age on the scale.

Symbolic play and language are both cognitive skills which require the child to mentally represent reality at various levels of abstraction (Fenson and Ramsay, 1980; McCune-Nicolich and Carroll, 1981; Lezine, 1973; Westby, 1980). Another developmental cognitive skill which requires the child to mentally represent reality is drawing (Goodnow, 1977; Goodnow and Friedman, 1972; Piaget and Inhelder, 1967). Lowenfeld and Brittain (1975) argue that drawing, because of visual-motor and eye-hand coordination limitations, does not begin to become functional for the child until approximately twenty-four months, i.e., in the form of an unstructured scribble. Following this early period, however, drawing rapidly becomes an important form of graphic symbolic representation for the child. This is evidenced in children's drawing as they begin to demonstrate an understanding of such complex cognitive skills as conservation and decentration (Goodnow, 1978; Lowenfeld and Brittain, 1975).

Basically, there appears to be a codable and identifiable developmental link between the representational abilities of symbolic play, language and drawing. The purpose of this preliminary study was to begin to investigate this link in two ways:

1. To develop a drawing scale which can be directly interfaced with the Westby Symbolic Play Scale.
2. To assess play, language, and drawing in normal language-learning and language delayed children in order to investigate patterns of development within and between each group.

METHODS

Subjects. The subjects were four normally developing children between the ages of three and five. They were attending a university laboratory preschool and had been diagnosed by the preschool as being free from physical and intellectual problems. In addition, five language-delayed children between the ages of two and one-half and six years were assessed. These five children were identified as language-delayed based on a complete speech and language evaluation in a public school setting which included results from formal language assessment procedures. All subjects had normal hearing and were free from all physical or serious intellectual handicapping conditions. Children identified as mentally retarded were specifically excluded from this investigation.

Play Language/Drawing Scale.[1] A revised form of the Westby (1980) scale which included play, language, and drawing was the assessment procedure used with all subjects. The revised scale consists of eleven stages which begin at the 9-12 month level for stage one and to the 5th+ year for stage eleven. In stages one through four, the scale addresses behaviors only in the language and play areas. Stages five through nine consider behaviors in play, language, and drawing. Stage eleven in concerned exclusively with drawing.

The sequence for the play and language stages of the scale were derived from Westby (1980) while the sequence stages for the drawing

[1]Copies of the scale are available from the authors on request.

portion of the scale were derived from Lowenfeld and Brittain (1975). Basically, drawing behaviors were used in the scale which related developmentally to the various play and language behaviors in the original Westby Scale.

Procedures for Administering the Scale. The scale was administered to all subjects in a single, continuous session. The observational data for play and language were derived from engaging the child in structural free play activities with the examiner. For the drawing portion of the scale, each subject was required to complete at least the following three drawings: 1) a free drawing of their choice, 2)a drawing of an animal of their choice, 3) a free drawing of their family or a family member.

To insure inter-rater reliability, the scale was administered and scored only by the three examiners who were directly involved in the original development of the scale. Simultaneous independent coding of randomly selected portions of the scale by the three examiners indicates an inter-rater agreement of .93 with both a normal and a language-delayed subject.

Scoring. Items on the scale were scored using a plus/minus system to indicate the presence or absence of a given behavior in any one stage. For a child to be given credit for achieving a particular stage on the scale, he or she could fail no more than one item at that level.

Analysis. Data for the present pilot study were graphed and studied visually in terms of distribution and level of function across the three areas of symbolic function examined i.e., play language and drawing. A descriptive analysis of the data is provided within and across subject groups.

RESULTS AND DISCUSSION

The results of administering the play language and drawing scale to the two groups of normal and language-delayed subjects are presented in Figures 1 and 2 respectively.

These data suggest that the normally developing subjects functioned at or near (±3 months) age level in all three areas of representational thought addressed on the scale. Language-delayed subjects, however, all demonstrated delays in the three representational areas of language, play and drawing. It is noteworthy that the language level of all language-delayed subjects on the scale was equal to or below their respective levels for play and drawing. Additionally, three of the five language-delayed subjects showed a performance pattern on the scale which suggests that language is lagging at least six months behind the development of their play and drawing behaviors.

These data suggest language-delayed children may not demonstrate age-level cognitive skills in the representational areas of play and drawing. Language-delayed children, however, may possess representational skills in play and drawing that are either equal to or above their level of language function. Based on this finding, a possible inference is that play and drawing may be appropriate for use in the remediation process to improve a child's level of language function. Certainly these results suggest not only a series of conclusions, but also a clear direction for the next phase of the project.

CONCLUSIONS

On the basis of the limited data collected in this pilot study, the following tentative conclusions may be drawn:

1. It is possible and appropriate to interface a drawing scale with a scale assessing other areas of representational thought, i.e., language and play.
2. Normally developing children should perform at an appropriate age level, plus or minus a stage in the areas of language, play, and drawing ability. They should not demonstrate unexplained splinter skills in any of these three areas.
3. If a child is language-delayed in relation to his or her chronological age, delays in play and drawing may be predictable due to the fact that all three skills are related to the representational thought process.
4. Language-delayed children should show a delay in play and drawing relative to chronological age. These delays in play and drawing, however, should be no greater than a child's language delays.
5. Based on the above mentioned conclusions (#4), it may be possible to use play and drawing in the remediation process to improve a child's level of language function.
6. Language-delayed subjects should demonstrate splinter skills in play, language, and drawing above their highest level of achievement on the scale.

DIRECTIONS FOR THE NEXT PHASE OF THE PROJECT

In order to further substantiate these conclusions and identify others, the most basic needs in the next phase of the present study are to:

1) Operationally define and explore the notion of splinter skills in these representational areas.
2) Revise the language section so that the items examined are sensitive to language behaviors in the areas of both comprehension and production.
3) Redefine behaviors in the play category to increase reliability and validity of that section.

In this study, language-delayed children were assessed using the play/language/drawing scale and other procedures which identify the language level of the child. Based on the results of these concurrently administered procedures, it is evident that the language portion of the scale needs to be more sensitive in order to establish accurate language levels in the child. By appropriately modifying the language portion of the scale in the areas of comprehension and production, both the reliability and concurrent validity of the procedure will be improved. Redefining the terms of the play portion of the scale will similarily improve both the internal consistency and item validity of the scale.

Once the scale has been revised relative to the above suggestions, investigation will be undertaken in controlled assessment environments to accomplish the following:

1) Establish the reliability and validity of the procedure.

2) Identify patterns of performance on the revised scale within and between normal, language-delayed, and mentally retarded children.

3) Attempt to identify the sequence of developmental and prerequisite skills which may be predictive of a child's later representational ability.

4) Explore the phenomenon of splinter skills which emerge on this scale. Specifically, consider the relationship of splinter skills to the above mentioned handicapping conditions and the teaching process.

5) Consider the usefulness of the scale in planning and implementing communication behavior treatment with language-delayed and retarded children.